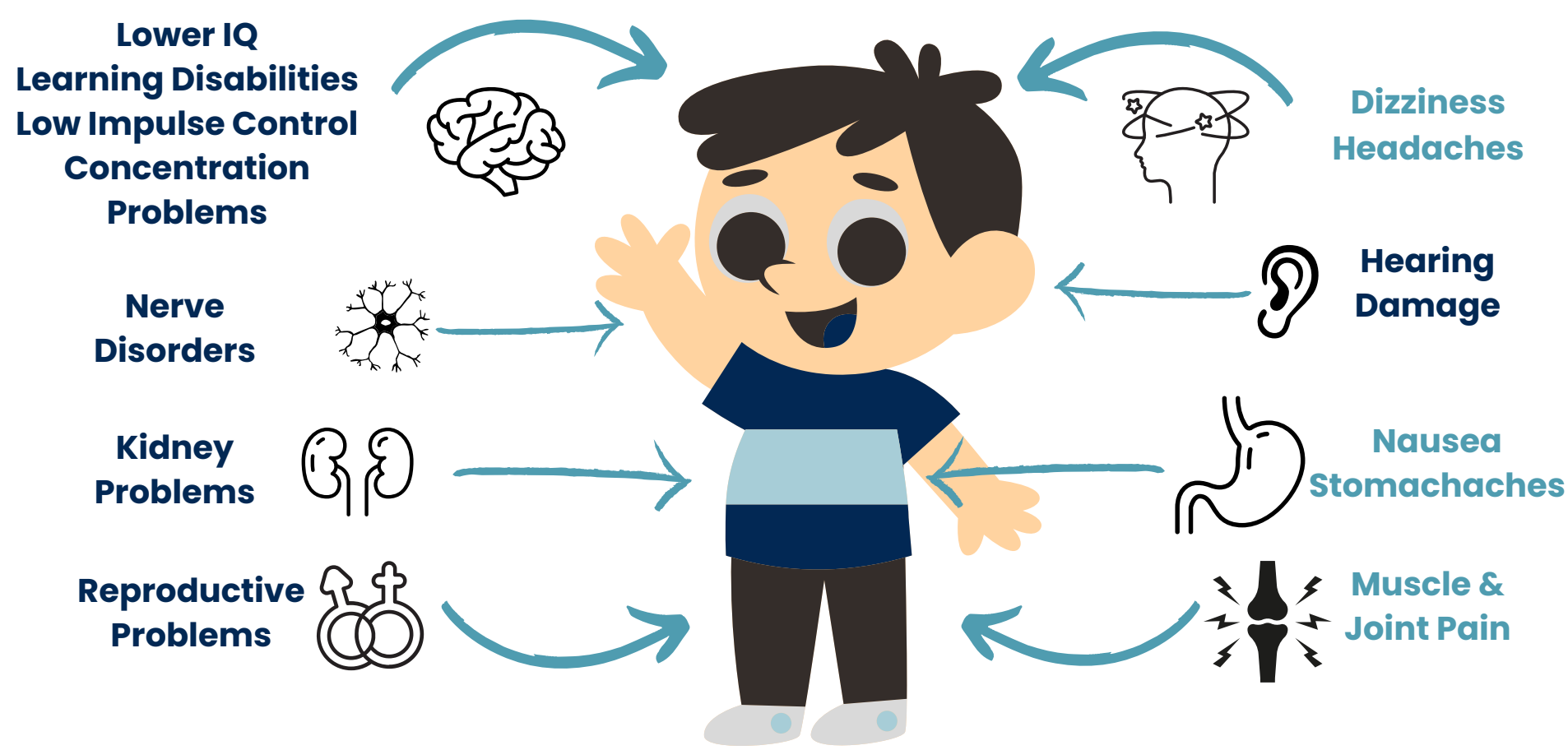


# Williams County Lead Report 2018-2022

The following report highlights lead poisoning data in children under the age of 6 from 2018-2022. There is no safe blood lead level (BLL) in children; even low levels of lead in blood are associated with developmental delays, difficulty learning, and behavioral issues. During this timeframe, a blood lead level of 5 micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ) was used to identify children with elevated blood levels. The Williams County Health Department recognizes the harmful effects of lead to children and the long term effects that this has on a child's personal health.

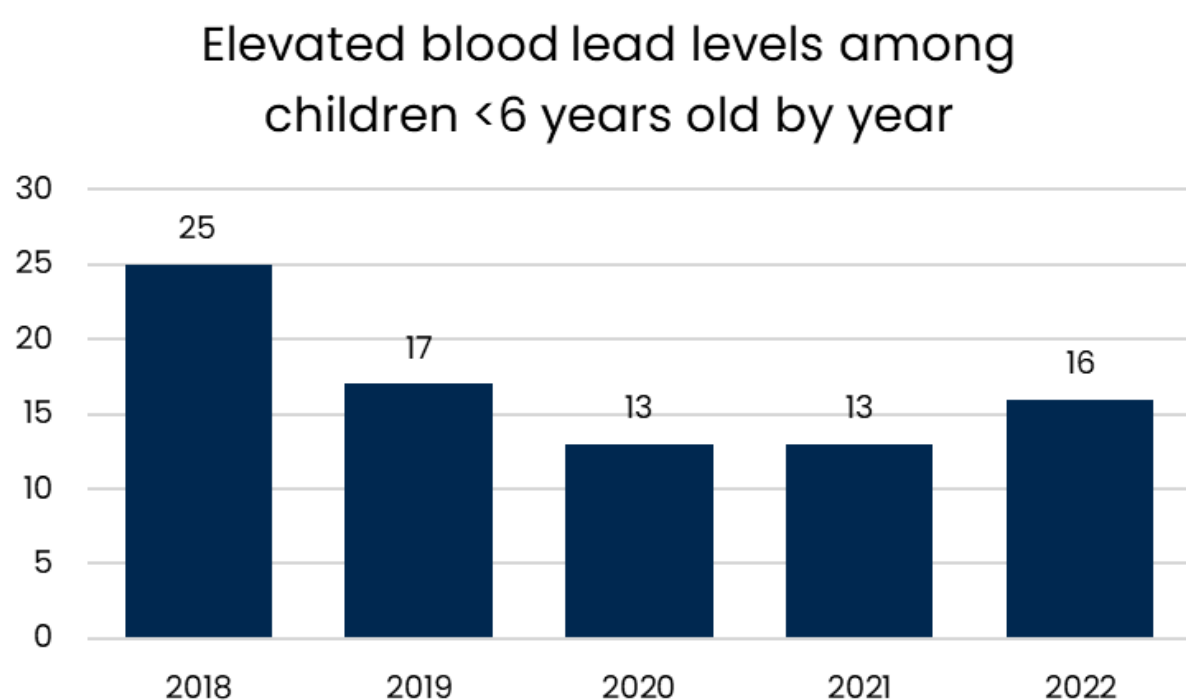
## Health Effects of Lead:

The effects of lead poisoning can be permanent and disabling. Exposure to lead can seriously harm a child's health and cause well-documented adverse effects in a child's health. Lead poisoning can have both **short-term** and permanent **long-term** effects on children. Lead can also have numerous **pregnancy-related effects** on pregnant moms and fetuses. During pregnancy, lead is released from the mother's bones along with calcium and can pass from the mother exposing the fetus or the breastfeeding infant to lead (EPA, 2023).



## Lead Data:

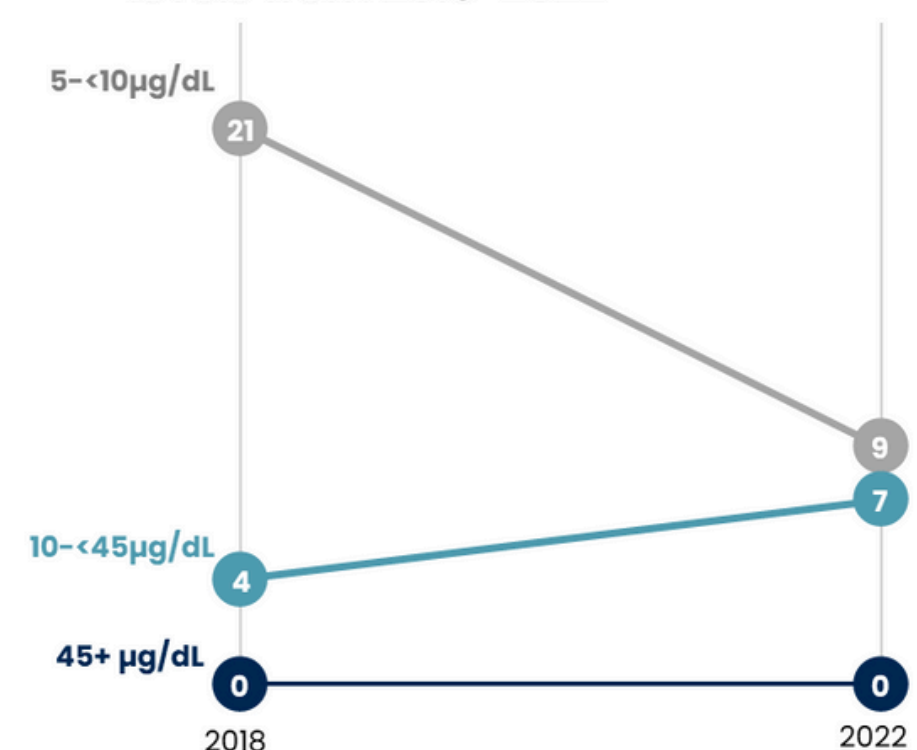
**Figure 1**



**Figure 1** shows that elevated blood lead levels have decreased from 2018-2021, then increased in 2022. Overall, elevated blood lead levels in children have been decreasing in Williams County.

**Figure 2**

Number of children <6 years old tested at elevated blood lead levels from 2018-2022



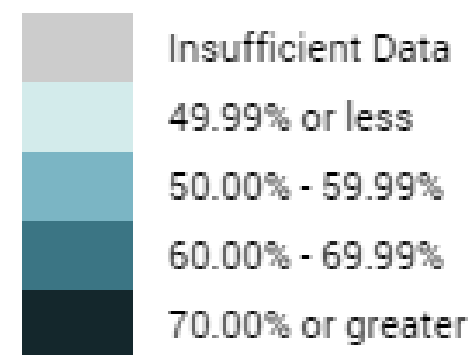
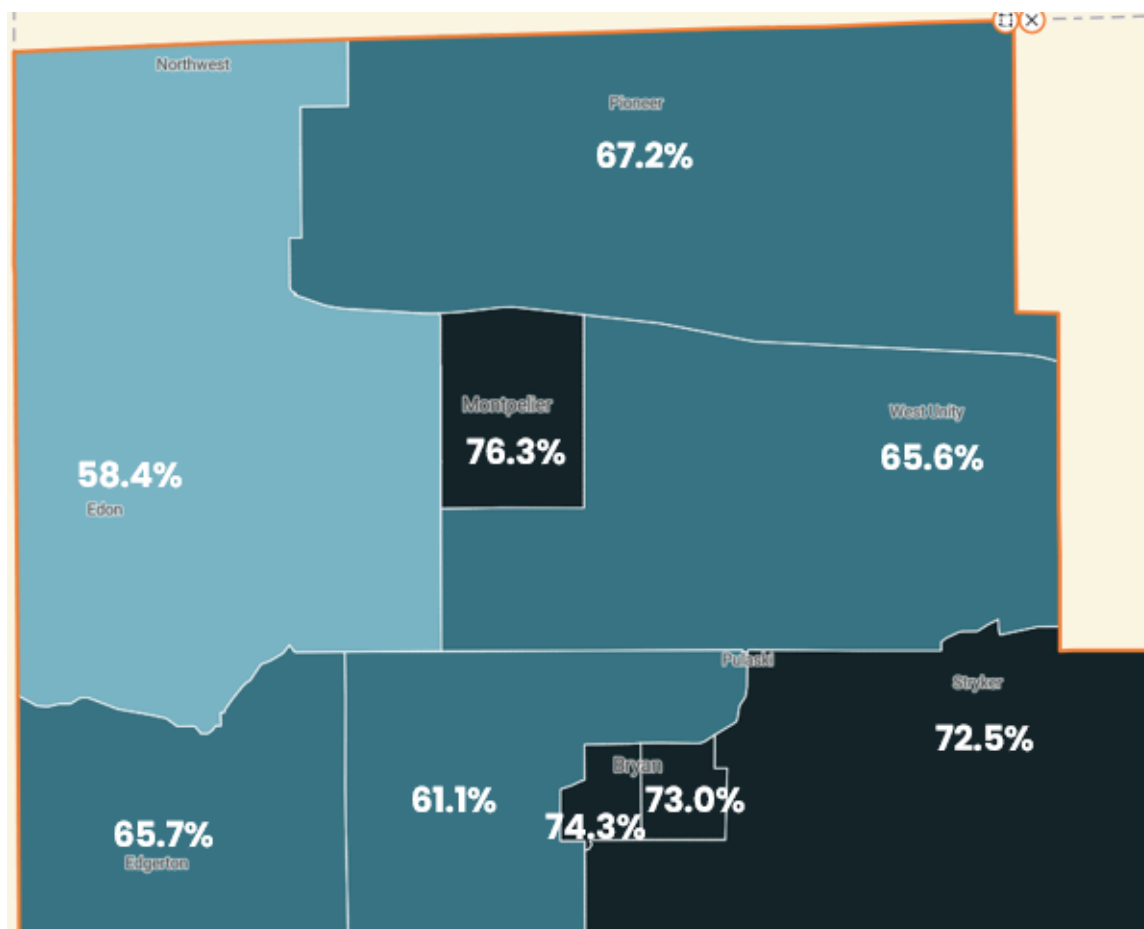
**Figure 2** shows a breakdown of the elevated blood lead levels and the trend from 2018-2022. The number of children testing at 5-<10 $\mu\text{g}/\text{dL}$  decreased, while those at 10-<45 $\mu\text{g}/\text{dL}$  increased from 4 to 7. Very high levels at 45+  $\mu\text{g}/\text{dL}$  remained stable.

**There is no safe level of lead for children.**

## Risk Factors:

Children from low-income households and those who live in **housing built before 1978** are at the greatest risk of lead exposure (CDC, 2023). Children six years old and younger are most susceptible to the effects of lead. **Figure 3** below shows the estimated percentage of all housing units built in 1979 or before, as of 2017–2021 in Williams County.

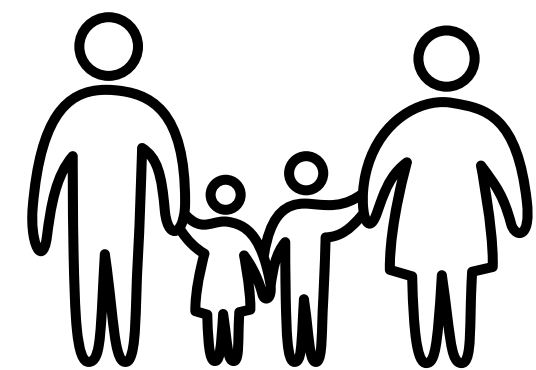
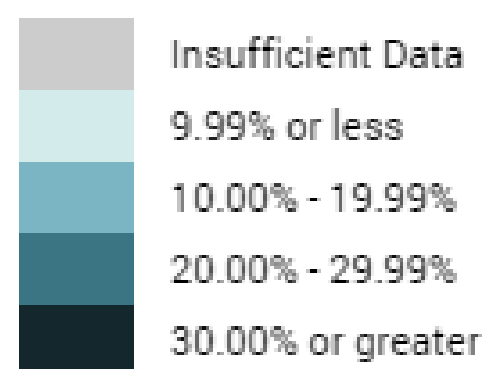
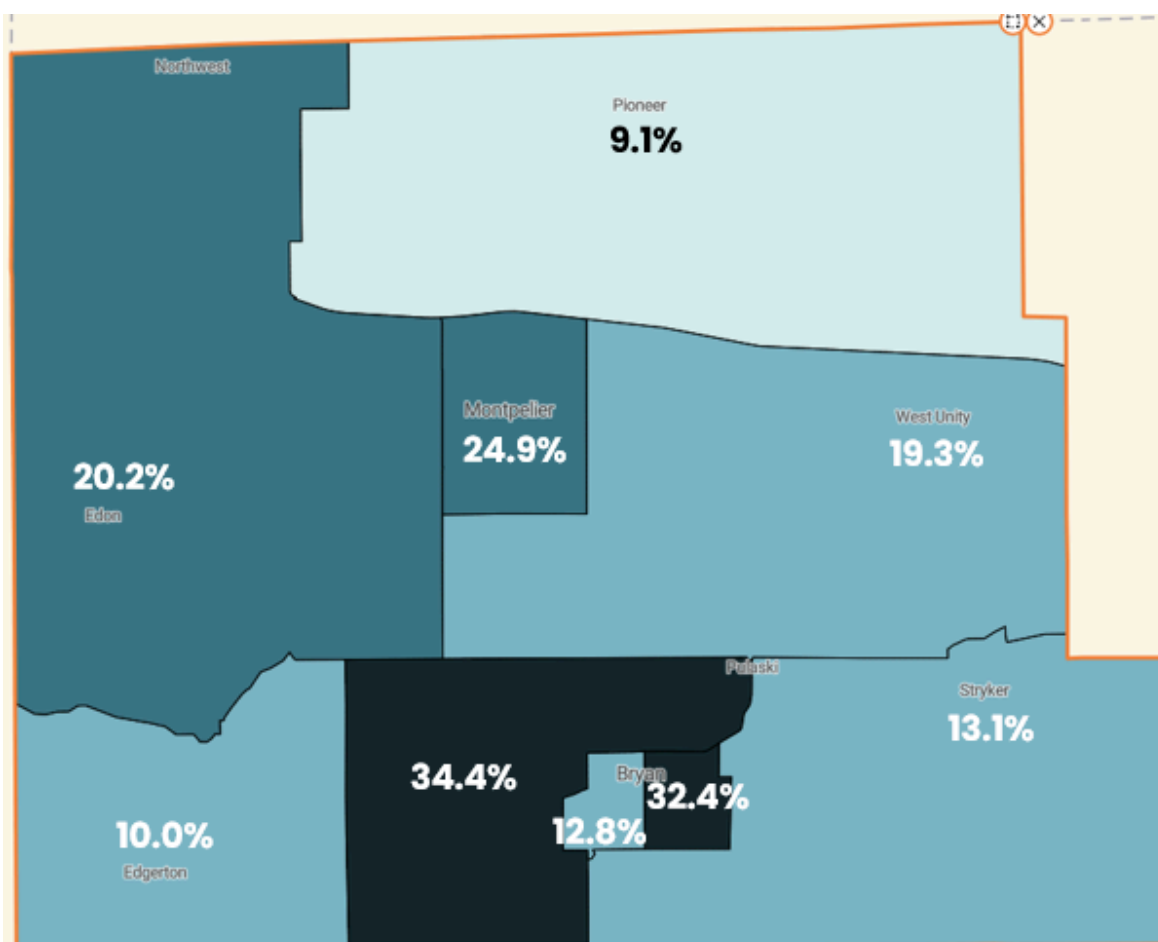
**Figure 3**



The Montpelier, Bryan, and Stryker areas have the highest percentage of houses built in 1978. The Edon and Northwest areas had the lowest. Overall, 68% of the housing in the county was built before 1978.

Children who live in **poverty** are also at risk for lead exposure. **Figure 4** below shows poverty rates for children under 5 years old by census tract in Williams County. A family of four with an annual income of \$31,200 or less is considered as living in poverty (U.S. Census, 2024).

**Figure 4**



The Pioneer area had the lowest poverty rates for children under 5 at 9.1%, while the Center to Pulaski area had the highest at 34.4%. In East Bryan, poverty rates for children under 5 were nearly **3x** higher than in West Bryan. Nearly 1 in 4 children under age 5 in the Montpelier area were living in poverty.

In addition to poverty and housing, individuals who are employed in certain occupations such as **manufacturing** and **construction** can be at an increased risk of lead exposure. **Figure 5** on the right shows that 36.3% of workers that are employed work in high-risk industries for lead exposure in Williams County.



**Figure 5**

Nearly 40% of workers work in **high risk industries** for lead exposure in Williams County

